SEQUENCES

<110> NATIONAL INSTITUTE FOR AGRICULTURAL RESEARCH (INRA)

<120> PROCEDURE FOR THE PREPARATION OF 1,3-PROPANEDIOL STARTING FROM A RECOMBINANT MICRO-ORGANISM, IN THE ABSENCE OF COENZYME B12 OR ONE OF ITS PRECURSORS.

<130> CHEP004US

<140> PCT/FR00/01981
<141> 2000-07-07

<160> 10

<170> Patent IN Ver. 2.1.

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Ile Leu Ile Thr Glu Ser Phe Lys Gln Thr Glu Gly Gln Pro Ala Ile
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Leu Arg Arg Ala Leu Ala Leu Lys His Ile Leu Glu Asn Ile Pro Ile
     50                  55                  60

Thr Ile Arg Asp Gln Glu Leu Ile Val Gly Ser Leu Thr Lys Glu Pro
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Arg Ser Ser Gln Val Phe Pro Glu Phe Ser Asn Lys Trp Leu Gln Asp
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Glu Leu Asp Arg Leu Asn Lys Arg Thr Gly Asp Ala Phe Gln Ile Ser
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Glu Glu Ser Lys Glu Lys Leu Lys Asp Val Phe Glu Tyr Trp Asn Gly
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Lys Thr Thr Ser Glu Leu Ala Thr Ser Tyr Met Thr Glu Glu Thr Arg
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Lys Phe Ala Gln Glu Leu Ile Asp Cys Ile Trp Ile Lys Leu Asn Asp
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Val Lys Leu Pro Gln Pro Ser Leu Ser Val Arg Ile Trp Asn Lys Thr
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Ser Arg Gly Leu Thr Leu Glu Asp Ala Arg Asp Tyr Gly Ile Ile Gly
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Pro Ser Ser Ile Asn Val Tyr Phe Gly Ser Leu Thr Gly Ala Thr Pro
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Phe His Pro Ser Ala Leu Lys Gly Asp Asn Gly Leu Met Asn Leu Ser
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Ser Leu Ile Arg Ser Tyr Phe Asp Gln Lys Gly Phe His Val Gln Phe
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Gly Gly Ile Thr Leu Ser Gly Gly Glu Val Leu Leu Gln Pro Asp Phe
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Gln Phe Ser Lys Ser Leu Thr Asn Leu Lys Arg Ile Asp Leu Leu Pro
                245                 250                 255

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Pro Tyr Ile Asp Leu Ala Met Ile Asp Ile Lys Ser Met Asn Asp Glu
180 185 190

Ile His Arg Lys Phe Thr Gly Val Ser Asn Glu Ile Ile Leu Gln Asn
195 200 205

Ile Lys Leu Ser Asp Glu Leu Ala Lys Glu Ile Ile Ile Arg Ile Pro
210 215 220

Val Ile Glu Gly Phe Asn Ala Asp Leu Gln Ser Ile Gly Ala Ile Ala
225 230 235 240

Gln Phe Ser Lys Ser Leu Thr Asn Leu Lys Arg Ile Asp Leu Leu Pro
245 250 255

Tyr His Asn Tyr Gly Glu Asn Lys Tyr Gln Ala Ile Gly Arg Glu Tyr
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Ser Leu Lys Glu Leu Lys Ser Pro Ser Lys Asp Lys Met Glu Arg Leu
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Lys Ala Leu Val Glu Ile Met Gly Ile Pro Cys Thr Ile Gly Ala Glu
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Lys Ala Leu Ile Val Thr Asp Lys Phe Leu Lys Asp Met Glu Gly Gly
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Ala Val Glu Leu Thr Val Lys Tyr Leu Lys Glu Ala Gly Leu Asp Val
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Val Tyr Tyr Asp Gly Val Glu Pro Asn Pro Lys Asp Val Asn Val Ile
65 70 75 80

Glu Gly Leu Lys Ile Phe Lys Glu Glu Asn Cys Asp Met Ile Val Thr
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Val Gly Gly Gly Ser Ser His Asp Cys Gly Lys Gly Ile Gly Ile Ala
100 105 110

Ala Thr His Glu Gly Asp Leu Tyr Asp Tyr Ala Gly Ile Glu Thr Leu
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Val Asn Pro Leu Pro Pro Ile Val Ala Val Asn Thr Thr Ala Gly Thr
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Ala Ser Glu Leu Thr Arg His Cys Val Leu Thr Asn Thr Lys Lys Lys
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Ile Lys Phe Val Ile Val Ser Trp Arg Asn Leu Pro Leu Val Ser Ile
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Asn Asp Pro Met Leu Met Val Lys Lys Pro Ala Gly Leu Thr Ala Ala
180 185 190

Thr Gly Met Asp Ala Leu Thr His Ala Ile Glu Ala Tyr Val Ser Lys
195 200 205

Asp Ala Asn Pro Val Thr Asp Ala Ser Ala Ile Gln Ala Ile Lys Leu
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Ile Ser Gln Asn Leu Arg Gln Ala Val Ala Leu Gly Glu Asn Leu Glu
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Ala Arg Glu Asn Met Ala Tyr Ala Ser Leu Leu Ala Gly Met Ala Phe
245 250 255

Asn Asn Ala Asn Leu Gly Tyr Val His Ala Met Ala His Gln Leu Gly
260 265 270

Gly Leu Tyr Asp Met Ala His Gly Val Ala Asn Ala Met Leu Leu Pro
275 280 285

His Val Glu Arg Tyr Asn Met Leu Ser Asn Pro Lys Lys Phe Ala Asp
290 295 300

Ile Ala Glu Phe Met Gly Glu Asn Ile Ser Gly Leu Ser Val Met Glu
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Ala Ala Glu Lys Ala Ile Asn Ala Met Phe Arg Leu Ser Glu Asp Val
325 330 335

Gly Ile Pro Lys Ser Leu Lys Glu Met Gly Val Lys Gln Glu Asp Phe
340 345 350

Glu His Met Ala Glu Leu Ala Leu Leu Asp Gly Asn Ala Phe Ser Asn
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